BA-24-1 Little Lake Shoreline Protection and Dedicated Dredging Near Round Lake

Coast 2050 Strategy - Regional Strategy #6; Use dedicated dredging or beneficial use of sediment for wetland creation or protection. Regional Strategy #24; Preserve bay and lake shoreline integrity on the landbridge.

Project Location - Region 2; Baratria Basin; Lafourche Parish. The project is located in the vicinity of southwestern Little Lake and is generally bound by the East and West Forks of Bayou L'Ours and the southern shoreline of Little Lake from Plum Point westward to Breton Canal.

Problem - The Little Lake mapping unit is an area of high wetland loss rates caused by shoreline erosion, subsidence, and channel construction. The project is located in an area protecting approximately 3,000 acres of fragile interior marsh located between the Little Lake shoreline and the Bayou L'Ours Ridge. Project area wetlands currently experience two major problems: high shoreline erosion rates (20 - 40 feet per year) and subsidence that deteriorates interior marshes. Project area marsh is expected to convert to mostly open water over the next 20 years. Continued shoreline erosion and wetland loss may adversely affect large areas of adjacent marsh.

Goals - a) Prevent erosion along approximately four miles of Little Lake shoreline; b) create 488 acres of intertidal wetlands along the Little Lake shoreline; c) nourish and maintain 532 acres intermediate marsh; and d) reduce land loss rates by 50% over the 20-year project life.

Proposed Solution - Installation of 21,000 feet of shoreline protection (geotextile encapsulated lightweight aggregate capped with rock) in open water, with a crest elevation approximately 2 feet above mean water. Perform dedicated dredging from Little Lake to create approximately 488 acres of intertidal elevation and nourish 532 acres of fragmented, subsiding marsh.

Project Benefits – The project would provide benefits to 1,373 acres, and would protect and/or create approximately 713 acres over the course of the 20 year project life.

Project Costs – The total fully funded cost is $37,174,900 and the fully funded first cost is $31,946,500.

Risk/Uncertainty and Longevity/Sustainability A low degree of risk is associated with the project because shoreline protection and marsh creation are proven restoration techniques, there are no anticipated impacts to oyster leases, and the area is owned by a single landowner which has participated in past restoration projects. Additionally, the project features are scalable, allowing for reconfiguration in Phase One to optimize project performance. The project should continue providing benefits for more than 20 years after construction because significant quantities of sediment will be placed in project area marshes and adequate maintenance of the shoreline protection features is provided.

Sponsoring Agency and Contact Person –
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Project area

Shoreline Protection

Data Source:
U.S.Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

LA Department of Natural Resources
Coastal Restoration Division

Map Date: November 12, 2001
Map ID: 200204112

Image Data:
1998 Digital Orthophoto Quarter Quads (DOQQS)

CWPPRA PPL11
Region 2

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Marsh Creation and Nourishment - Area A
Shoreline Protection - Areas A, B and C